

FIG. 1A

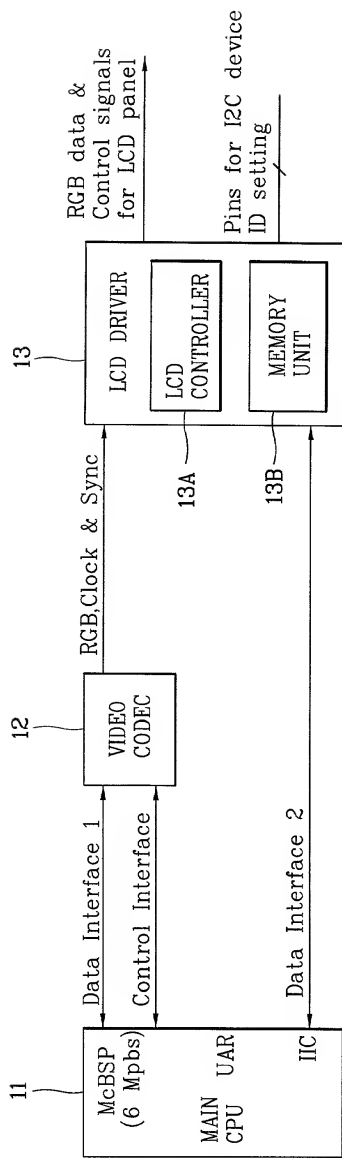


FIG. 1B

3 Mode Operation

Active Mode(Data Interface 1):

- JPEG,GIF
- MPEG4
- MP3(128kbps).AAC
- Animation(Game)
- Text Service

Standby Mode(Data Interface 2):

- Animation, Still Image & Text, Text only

Power Down Mode

- LCD Driver IC power off, but SRAM is alive

Display Scheme

Active Mode

- Normal Operation
- Main CPU, Video CODEC and LCD driver IC are all alive
- LCD display frame rate of ~30 frames/sec

Standby Mode

- Power Saving Mode(Video CODEC is powered off)
- Animation or Still Image & Text or Text can be displayed
- LCD display frame rate of ~5 frames/sec

Power Down Mode

- Nothing is displayed, Ready for displaying

FIG. 2

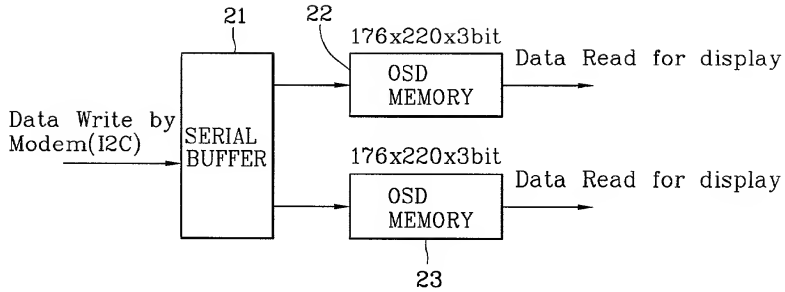
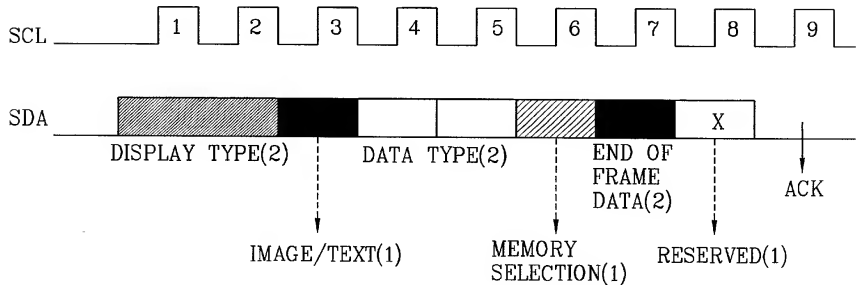


FIG. 3



DISPLAY TYPE(2bits)

00: ANIMATION
01: STILL IMAGE & TEXT
10: TEXT ONLY
11: REGISTER CONTROL

IMAGE/TEXT(1bit)

0: TEXT DATA
1: IMAGE DATA

DATA TYPE(2bit)

00: BURST DATA
01: AREA DATA
10: LINE DATA
11: PIXEL DATA

OSD MEMORY SELECTION(1bit)

0: OSD MEMORY 1(FIRST)
1: OSD MEMORY 2(SECOND)

END OF FRAME DATA(1bit)

0: NOT EOFD
1: EOFD

FIG. 4

IMAGE DATA REPRESENTATION(3bits)

000: BLACK
001: BLUE
010: GREEN
011: CYAN
100: RED
101: MAGENTA
110: YELLOW
111: WHITE

TEXT DATA REPRESENTATION(1bit)

0: BACKGROUND DATA
1: TEXT DATA

FIG. 5

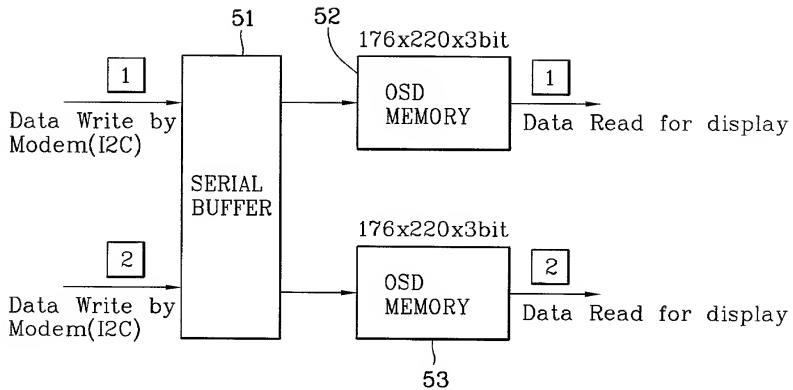


FIG. 6

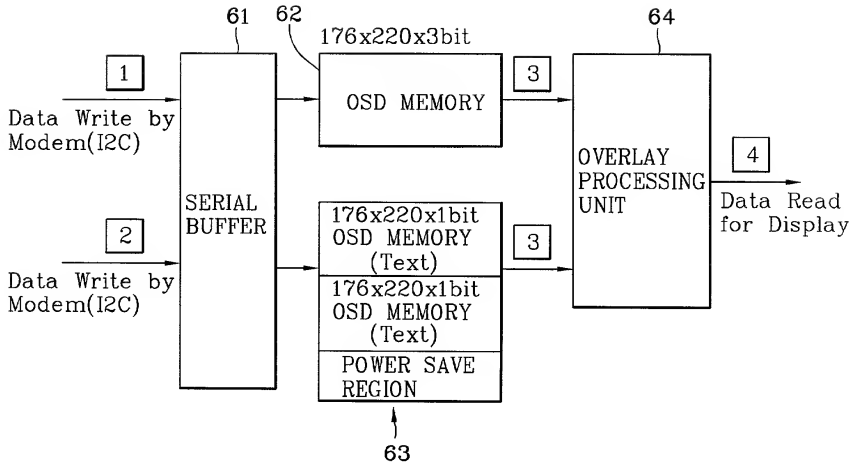


FIG. 7

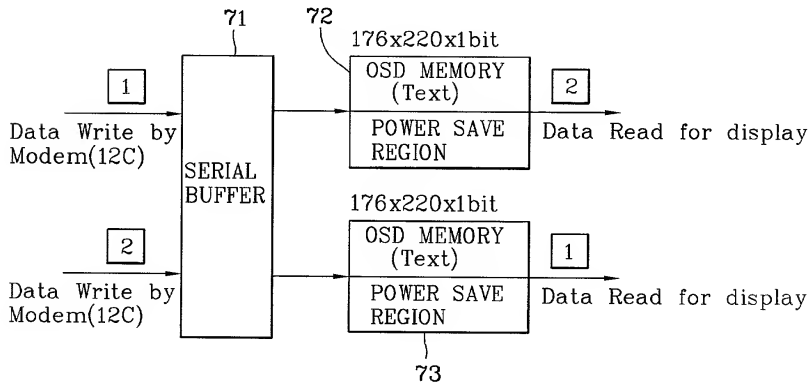
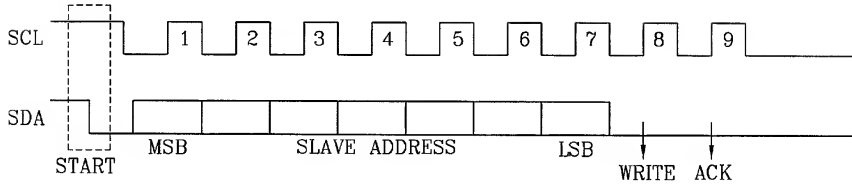
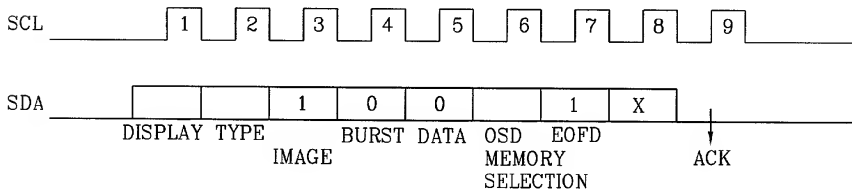


FIG. 8A

CASE 1. BURST DATA WRITE(IMAGE) SLAVE ADDRESS TRANSFER



MODE SETTING



PIXEL DATA TRANSFER

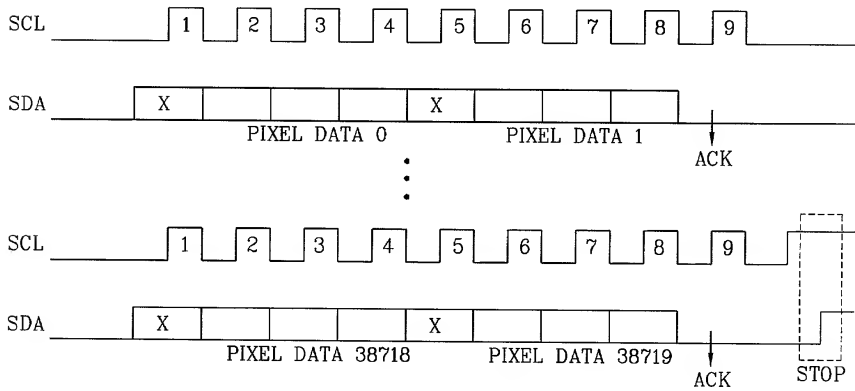
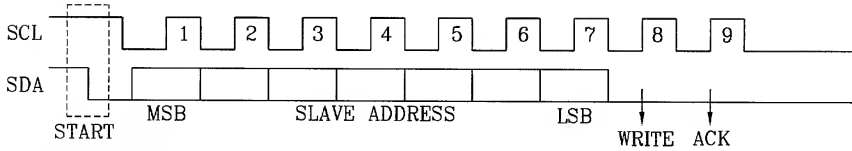
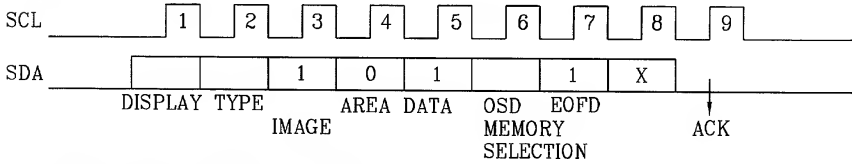


FIG. 8B

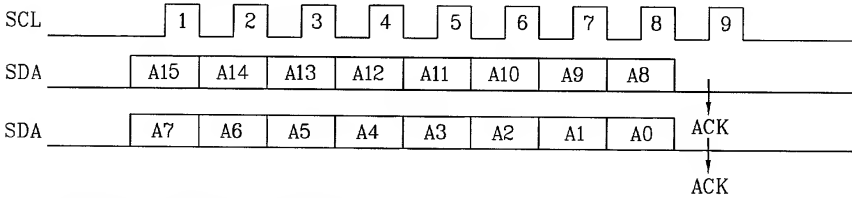
CASE 2. AREA DATA WRITE(IMAGE) SLAVE ADDRESS TRANSFER



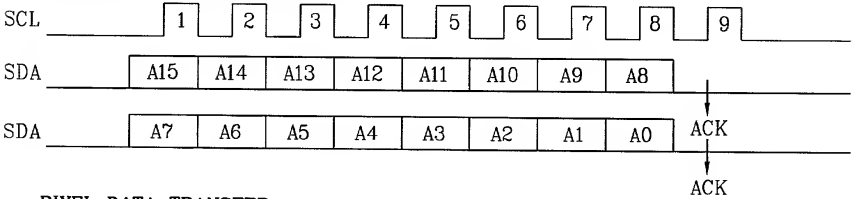
MODE SETTING



AREA START ADDRESS TRANSFER



AREA END ADDRESS TRANSFER



PIXEL DATA TRANSFER

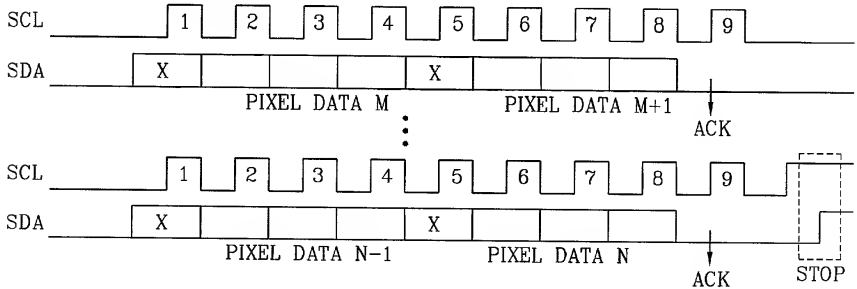
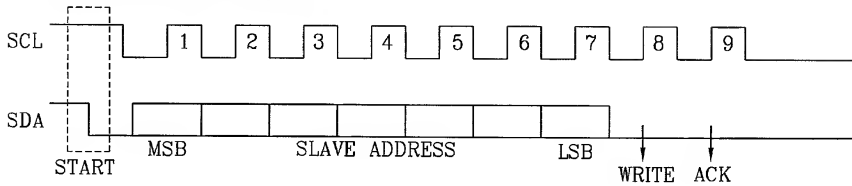
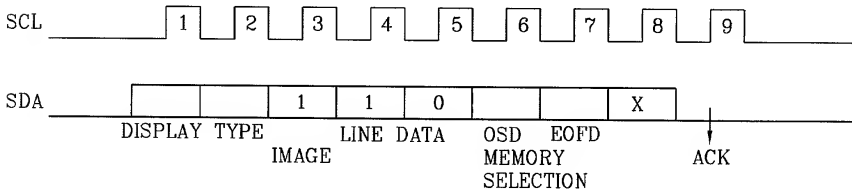


FIG. 8C

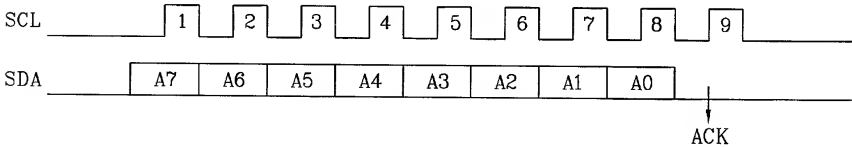
CASE 3. LINE DATA WRITE(IMAGE) SLAVE ADDRESS TRANSFER



MODE SETTING



LINE ADDRESS TRANSFER



PIXEL DATA TRANSFER

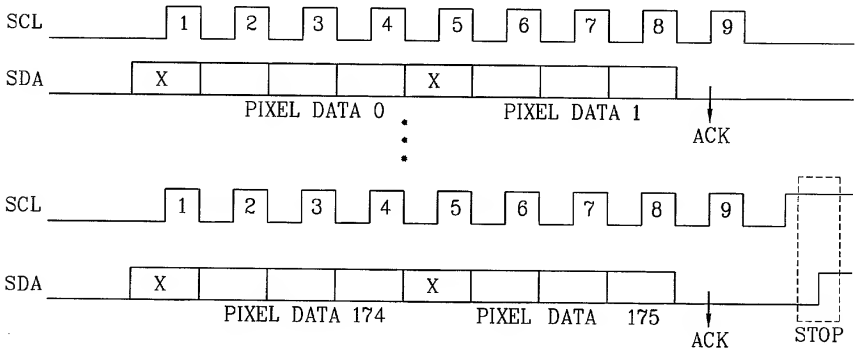
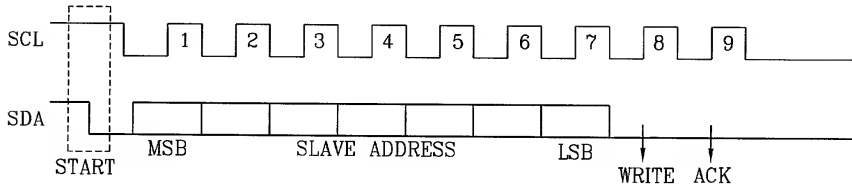
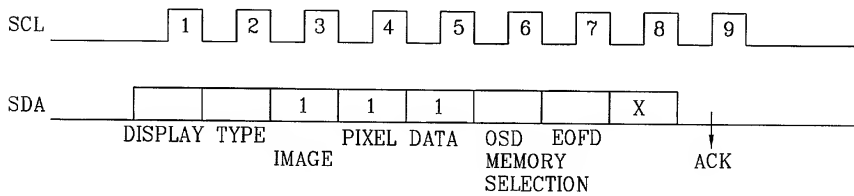


FIG. 8D

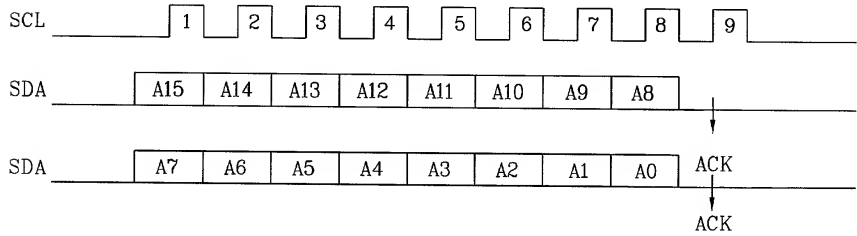
CASE 4. PIXEL DATA WRITE(IMAGE) SLAVE ADDRESS TRANSFER



MODE SETTING



PIXEL ADDRESS TRANSFER



PIXEL DATA TRANSFER

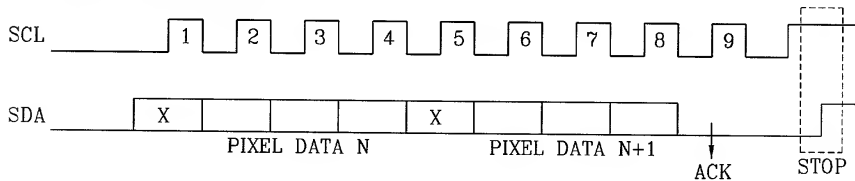
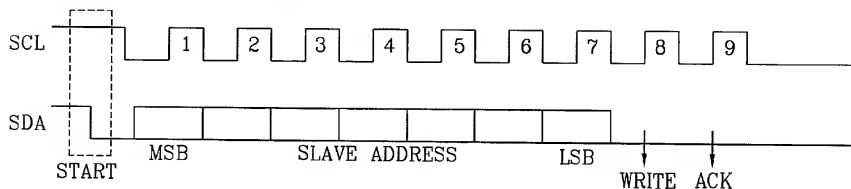
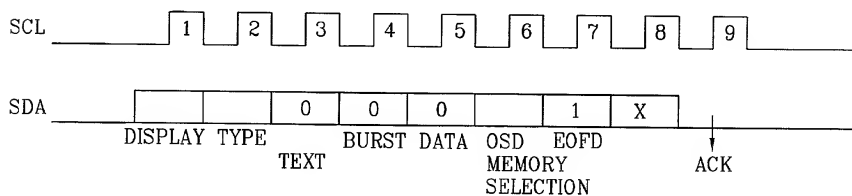


FIG. 8E

CASE 5. BURST DATA WRITE(TEXT) SLAVE ADDRESS TRANSFER



MODE SETTING



TEXT DATA TRANSFER

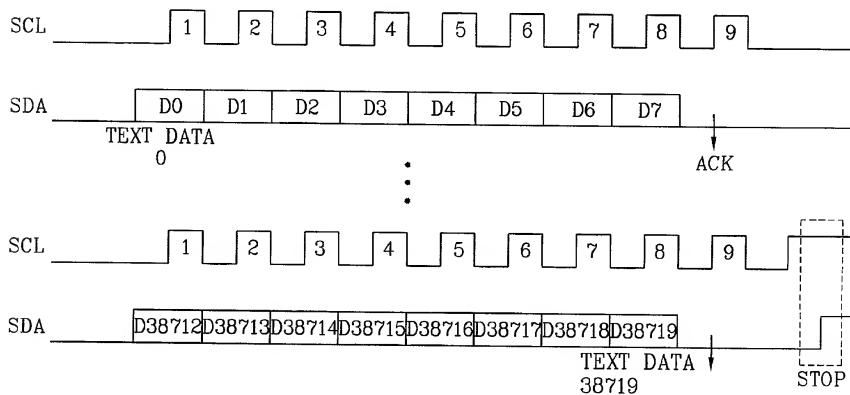
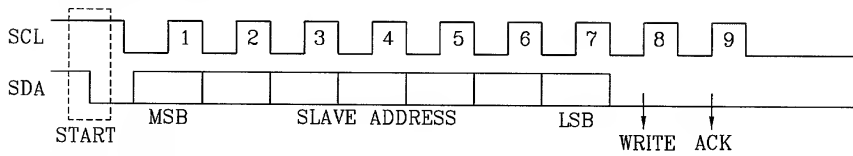
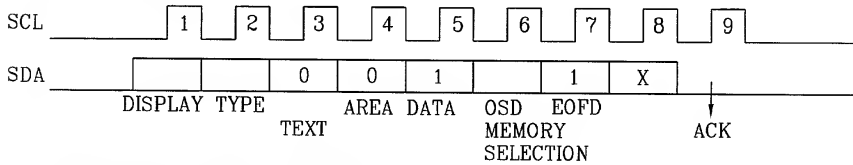


FIG. 8F

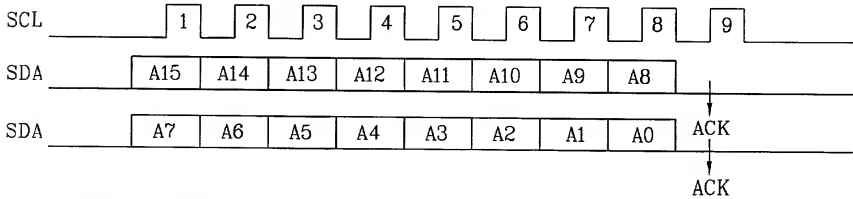
CASE 6. AREA DATA WRITE(TEXT) SLAVE ADDRESS TRANSFER



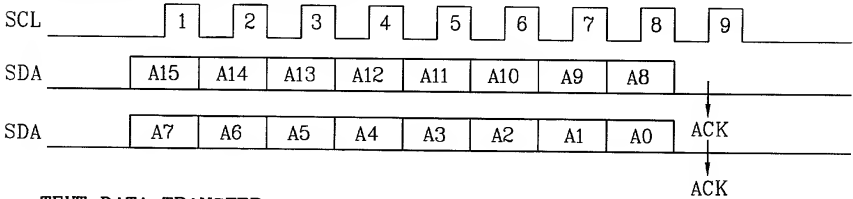
MODE SETTING



AREA START ADDRESS TRANSFER



AREA END ADDRESS TRANSFER



TEXT DATA TRANSFER

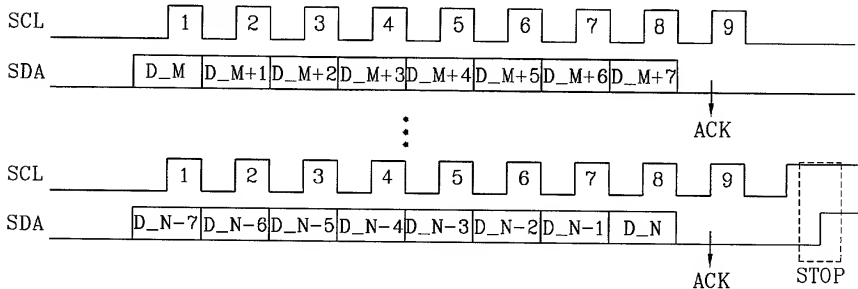
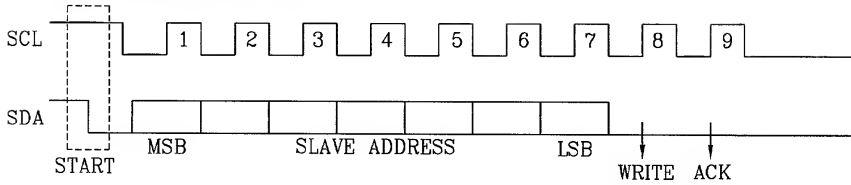
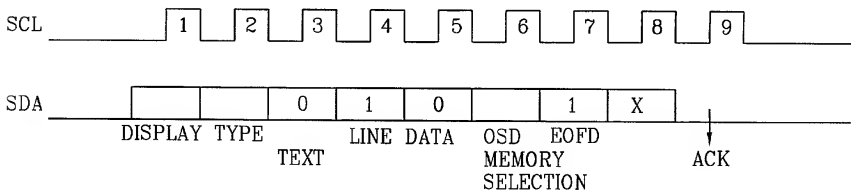


FIG. 8G

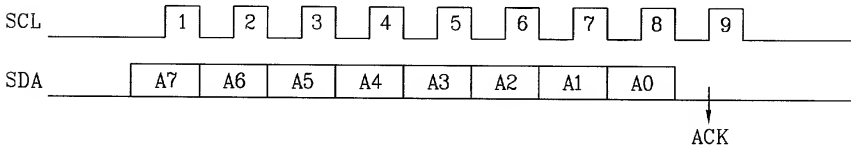
CASE 7. LINE DATA WRITE(TEXT) SLAVE ADDRESS TRANSFER



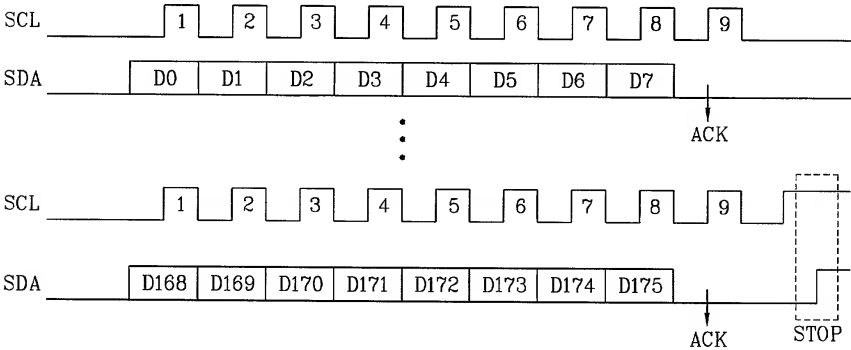
MODE SETTING



LINE ADDRESS TRANSFER



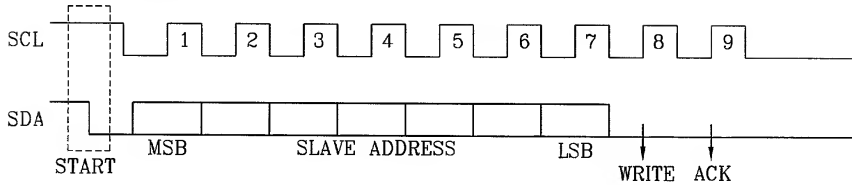
TEXT DATA TRANSFER



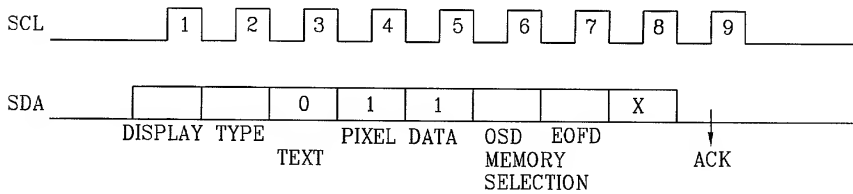
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FIG. 8H

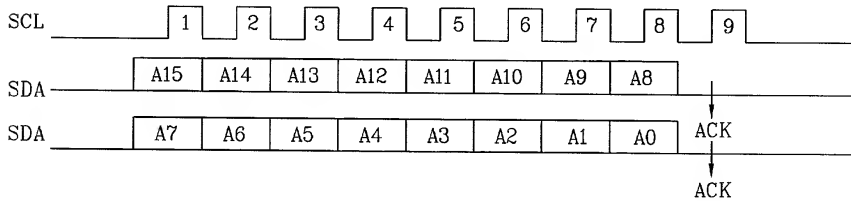
CASE 8. PIXEL DATA WRITE(TEXT) SLAVE ADDRESS TRANSFER



MODE SETTING



PIXEL ADDRESS TRANSFER



TEXT DATA TRANSFER

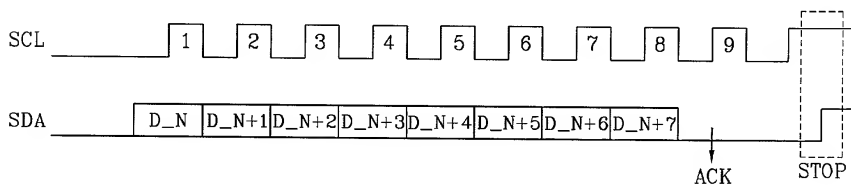
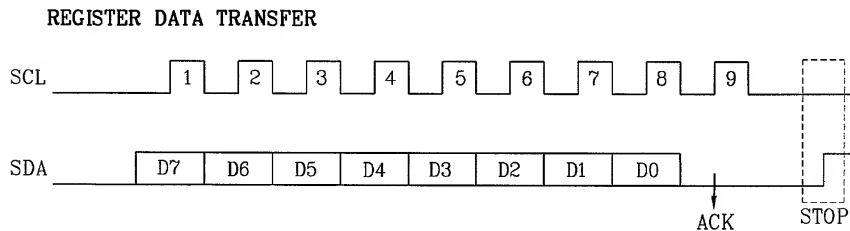
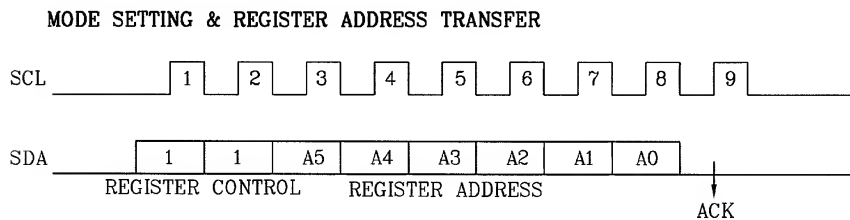
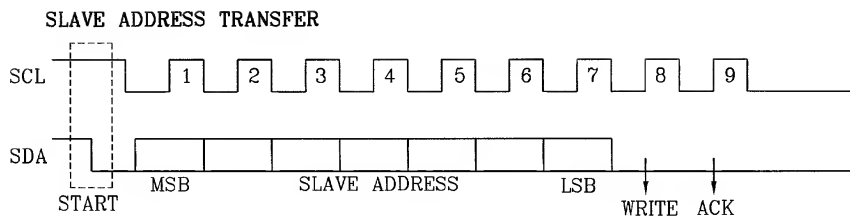


FIG. 9



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